

# Cisco

## Exam Questions 400-007

Cisco Certified Design Expert (CCDE v3.0) Written Exam



#### NEW QUESTION 1

An enterprise network has two core routers that connect to 200 distribution routers and uses fullmesh IBGP peering between these routers as its routing method. The distribution routers are experiencing high CPU utilization due to the BGP process. Which design solution is the most cost effective?

- A. Implement route reflectors on the two core routers
- B. Increase the memory on the core routers
- C. Implement e BGP between the core and distribution routers
- D. Increase the memory on the distribution routers
- E. Increase bandwidth between the core routers

**Answer:** A

#### NEW QUESTION 2

Refer to the table.

A customer investigates connectivity options for a DCI between two production data centers to aid a large-scale migration project. The migration is estimated to take 20 months to complete but might extend an additional 10 months if issues arise. All connectivity options meet the requirements to migrate workloads. Which transport technology provides the best ROI based on cost and flexibility?

- A. CWDM over dark fiber
- B. MPLS
- C. DWDM over dark fiber
- D. Metro Ethernet

**Answer:** D

#### NEW QUESTION 3

Which BGP feature provides fast convergence?

- A. BGP PIC |
- B. BGP-EVPN
- C. BGP FlowSpec
- D. BGP-LS

**Answer:** A

#### NEW QUESTION 4

Which mechanism provides Layer 2 fault isolation between data centers?

- A. fabric path
- B. OTL
- C. advanced VPLS
- D. LISP
- E. TRILL

**Answer:** D

#### NEW QUESTION 5

You are designing a network for a branch office. In order to improve convergence time, you are required to use the BFD feature Which four routing protocols can you use to facilitate this? (Choose four.)

- A. IS-IS
- B. static
- C. RIP
- D. EIGRP
- E. BGP

**Answer:** ABDE

#### NEW QUESTION 6

Company XYZ is designing the network for IPv6 security and they have these design requirements:

- A switch or router must deny access to traffic from sources with addresses that are correct, but are topologically incorrect
- Devices must block Neighbor Discovery Protocol resolution for destination addresses that are not found in the binding table.

Which two IPv4 security features are recommended for this company? (Choose two)

- A. IPv6 DHCP Guard
- B. IPv6 Source Guard
- C. IPv6 Destination Guard
- D. IPv6 Prefix Guard
- E. IPv6 RA Guard

**Answer:** CD

#### NEW QUESTION 7

Which two impacts of adding the IP event dampening feature to a network design are true? (Choose two.)

- A. It protects against routing loops.
- B. It switches traffic immediately after a link failure.
- C. It speeds up link failure detection.
- D. It reduces the utilization of system processing resources.
- E. It improves overall network stability.

**Answer:** DE

#### NEW QUESTION 8

Which two control plane policer designs must be considered to achieve high availability? (Choose two.)

- A. Control plane policers are enforced in hardware to protect the software path, but they are hardware platform dependent in terms of classification ability.
- B. Control plane policers are really needed only on externally facing devices.
- C. Control plane policers can cause the network management systems to create false alarms.
- D. Control plane policers must be processed before a forwarding decision is made.
- E. Control plane policers require that adequate protocols overhead are factored in to allow protocol convergence.

**Answer:** AD

#### NEW QUESTION 9

The Company XYZ network is experiencing attacks against their router.

Which type of Control Plane Protection must be used on the router to protect all control plane IP traffic that is destined directly for one of the router interfaces?

- A. Control Plane Protection host subinterface
- B. Control Plane Protection main interface
- C. Control Plane Protection transit subinterface
- D. Control Plane Protection CEF-exception subinterface

**Answer:** A

#### NEW QUESTION 10

What is the most important operational driver in building a resilient and secure modular network design?

- A. Dependencies on hardware or software that is difficult to scale
- B. Minimize app downtime
- C. Reduce the frequency of failures requiring human intervention
- D. Increase time spent on developing new features

**Answer:** C

#### NEW QUESTION 10

Organizations that embrace Zero Trust initiatives ranging from business policies to technology infrastructure can reap business and security benefits.

Which two domains should be covered under Zero Trust initiatives? (Choose two)

- A. workload
- B. work domain
- C. workplace
- D. workgroup
- E. workspace

**Answer:** AC

#### NEW QUESTION 11

Which two types of planning approaches are used to develop business-driven network designs and to facilitate the design decisions? (Choose two)

- A. cost optimization approach
- B. strategic planning approach
- C. modular approach
- D. tactical planning approach
- E. business optimization approach

**Answer:** BD

#### NEW QUESTION 14

Which two features control multicast traffic in a VLAN environment? (Choose two)

- A. IGMP snooping
- B. MLD snooping
- C. RGMP
- D. PIM snooping
- E. pruning

**Answer:** AB

#### NEW QUESTION 16

Company XYZ has a new network based on IPv6. Some of the subnets that they are planning to use will be confidential and need an addressing scheme that confines them to the local campus network.

Which type of IPv6 addresses can be used for these networks in the IPv6 addressing design?

- A. local addresses
- B. private addresses
- C. link-local addresses
- D. unique local addresses

**Answer:** D

#### NEW QUESTION 17

Company XYZ has 30 sites running a legacy private WAN architecture that connects to the Internet via multiple highspeed connections.

The company is now redesigning their network and must comply with these design requirements:

- Use a private WAN strategy that allows the sites to connect to each other directly and caters for future expansion.
- Use the Internet as the underlay for the private WAN. Securely transfer the corporate data over the private WAN.

Which two technologies should be incorporated into the design of this network? (Choose two.)

- A. S-VTI
- B. IPsec
- C. DMVPN
- D. GET VPN
- E. PPTP

**Answer:** BC

#### NEW QUESTION 19

According to the CIA triad principles for network security design, which principle should be priority for a Zero Trust network?

- A. requirement for data-in-motion encryption and 2FA authentication
- B. requirement for data-at-rest encryption for user identification within the VPN termination hardware
- C. categorization of systems, data, and enterprise BYOD assets that are connected to network zones based on individual privacy needs
- D. ensuring that authorized users have high-availability system access from defined zones to defined systems or zones

**Answer:** A

#### NEW QUESTION 21

Refer to the exhibit. OSPF is running as the IGP to provide reachability to all AS100 networks. R3 and R4 are the current ABRs at the boundary of OSPF Area0 and Area1. Now BGP must be deployed within AS 100 because it will be receiving Internet routes from its eBGP peers (the service provider) connected to R1 and R2.

What is an optimal solution for this deployment to configure BGP relationships and redistribute BGP learned routes into OSPF?

- A. R5 should be configured as a route reflector for R1, R2, R3 and R4. BGP routes must be redistributed at R1 and R2 into OSPF.
- B. Configuration should be set up with R1 and R2, and R3 in one sub AS, with and R4 in another, and redistribution at R1 and R2.
- C. A full mesh should be deployed between all the routers with mutual redistribution to take place at R1 and R2.
- D. R1, R2, R3 and R4 must be set up with a neighbor relationship with R5 only must not be a route reflector.

**Answer: C**

#### NEW QUESTION 26

Your company wants to deploy a new data center infrastructure.

Based on the requirements you have chosen VXLAN as encapsulation technology.

The customer is concerned about miss-configuration of Layer 2 devices and DC wide outages caused by Layer 2 loops.

What do you answer?

- A. VXLAN offers native loop avoidance mechanism
- B. Storm Control should be enabled on all ports
- C. VPC+ could prevent L2 loop on access ports
- D. BPDU Guard should be enabled on all VTEP access ports

**Answer: D**

#### NEW QUESTION 27

Refer to the exhibit. Your company designed a network to allow server VLANs to span all access switches in a data center.

In the design, Layer 3 VLAN interfaces and HSRP are configured on the aggregation switches.

Which two features improve STP stability within the network design? (Choose two.)

- A. BPDU guard on access ports
- B. BPDU guard on the aggregation switch downlinks toward access switches
- C. root guard on the aggregation switch downlinks toward access switches
- D. root guard on access ports
- E. edge port on access ports
- F. access switch pairs explicitly determined to be root and backup root bridges

**Answer: AE**

#### NEW QUESTION 29

A service provider hires you to design its new managed CE offering to meet these requirements:

- The CEs cannot run a routing protocol with the PE
- Provide the ability for equal or unequal ingress load balancing in dual-homed CE scenarios.
- Provide support for IPv6 customer routes
- Scale up to 250,000 CE devices per customer.
- Provide low operational management to scale customer growth.
- Utilize low-end (inexpensive) routing platforms for CE functionality.

Which tunneling technology do you recommend?

- A. FlexVPN
- B. point-to-point GRE
- C. DMVPN
- D. LISP

**Answer: D**

#### NEW QUESTION 33

When designing a WAN that will be carrying real-time traffic, what are two important reasons to consider serialization delay? (Choose two)

- A. Serialization delays are invariable because they depend only on the line rate of the interface
- B. Serialization delays are variable because they depend on the line rate of the interface and on the type of the packet being serialized.
- C. Serialization delay is the time required to transmit the packet on the physical media.
- D. Serialization delays are variable because they depend only on the size of the packet being serialized
- E. Serialization delay depends not only on the line rate of the interface but also on the size of the packet

**Answer: BD**

#### NEW QUESTION 36

Which two foundational aspects of IoT are still evolving and being worked on by the industry at large? (Choose two)

- A. WiFi protocols
- B. Regulatory domains
- C. Low energy Bluetooth sensors

- D. IoT consortia
- E. Standards

**Answer:** AC

#### NEW QUESTION 37

You were tasked to enhance the security of a network with these characteristics:

- A pool of servers is accessed by numerous data centers and remote sites
- The servers are accessed via a cluster of firewalls
- The firewalls are configured properly and are not dropping traffic
- The firewalls occasionally cause asymmetric routing of traffic within the server data center.

Which technology should you recommend to enhance security by limiting traffic that could originate from a hacker compromising a workstation and redirecting flows at the servers?

- A. Poison certain subnets by adding static routes to Null0 on the core switches connected to the pool of servers.
- B. Deploy uRPF strict mode.
- C. Limit sources of traffic that exit the server-facing interface of the firewall cluster with ACLs.
- D. Deploy uRPF loose mode

**Answer:** C

#### NEW QUESTION 41

A network architect must redesign a service provider edge, where multiservice and multitenant PEs are currently present. Which design feature should be minimized in the new design to achieve reliability?

- A. bridging
- B. fate sharing
- C. redundancy
- D. unicast overlay routing

**Answer:** B

#### NEW QUESTION 46

What are two key design principles when using a hierarchical core-distribution-access network model? (Choose two )

- A. A hierarchical network design model aids fault isolation
- B. The core layer is designed first, followed by the distribution layer and then the access layer
- C. The core layer provides server access in a small campus.
- D. A hierarchical network design facilitates changes
- E. The core layer controls access to resources for security

**Answer:** AD

#### NEW QUESTION 51

As part of a new network design documentation, you are required to explain the reason for choosing Cisco FabricPath for Layer 2 loop avoidance. Which two elements help Cisco FabricPath mitigate Layer 2 loops if they happen in the Layer 2 MP network? (Choose two)

- A. MAC tunneling
- B. IS-IS multipath
- C. RPF check
- D. TTL header

**Answer:** CD

#### NEW QUESTION 56

You are a network designer and you must ensure that the network you design is secure.

How do you plan to prevent infected devices on your network from sourcing random DDoS attacks using forged source address?

- A. ACL based forwarding
- B. unicast RPF loose mode
- C. unicast RPF strict mode
- D. ACL filtering by destination

**Answer:** C

#### NEW QUESTION 61

Refer to the exhibit. A links are P2P Layer 3. A high availability application is synchronizing data between host A and host B.

To increase chance of delivery the same data is sent twice from host A on two different NICs toward the two NICs on host B. Which solution must be deployed in the network to ensure that any failure in the network does not trigger data loss on host B?

- A. EIGRP with feasible successors
- B. BFD
- C. IP Fast Reroute
- D. Static routes

**Answer:** C

#### NEW QUESTION 65

Which encoding format does cisco ios XE software support for NETCONF?

- A. It supports HTML encoding for NETCONF
- B. It supports YAML encoding for NETCONF
- C. It supports XML encoding for NETCONF
- D. It supports JSON encoding for NETCONF

**Answer: C**

#### NEW QUESTION 66

Which two design solutions ensure sub 50 msec of the convergence time after a link failure in the network? (Choose two)

- A. BFD
- B. Ti-LFA
- C. minimal BGP scan time
- D. MPLS-FRR
- E. IGP fast hello

**Answer: BD**

#### NEW QUESTION 69

Refer to the exhibit. A new high availability DB sever cluster is installed in the network.

These two servers require high bandwidth and low latency Layer 2 connectivity for database replication.  
Which solution supports these requirements?

- A. Add two new links between SW1 and SW2 configured as LACP trunk with STP
- B. Add secondary links to REP segments 1 and 2
- C. Add two new links between SW1 and SW2 configured as REP segment 3
- D. Add two new links between SW1 and SW2 configured as REP segments 1 and 2 respectively

**Answer: C**

#### NEW QUESTION 74

SDWAN networks capitalize the usage of broadband Internet links over traditional MPLS links to offer more cost benefits to enterprise customers. However, due to the insecure nature of the public Internet, it is mandatory to use encryption of traffic between any two SDWAN edge devices installed behind NAT gateways.  
Which overlay method can provide optimal transport over unreliable underlay networks that are behind NAT gateways?

- A. TLS
- B. DTLS
- C. IPsec
- D. GRE

**Answer: C**

#### NEW QUESTION 75

What are two primary design constraints when a robust infrastructure solution is created? (Choose two.)

- A. monitoring capabilities
- B. project time frame
- C. staff experience
- D. component availability
- E. total cost

**Answer: BE**

#### NEW QUESTION 80

SD-WAN can be used to provide secure connectivity to remote offices, branch offices, campus networks, data centers, and the cloud over any type of IP-based underlay transport network. Which two statements describe SD WAN solutions? (Choose two.)

- A. SD-WAN networks are inherently protected against slow performance.
- B. Control and data forwarding planes are kept separate.
- C. Improved operational efficiencies result in cost savings.
- D. Solutions include centralized orchestration, control, and zero-touch provisioning.
- E. Solutions allow for variations of commodity and specialized switching hardware.

**Answer: BD**

#### NEW QUESTION 84

An architect designs a multi-controller network architecture with these requirements:

- Achieve fast failover to control traffic when controllers fail.
- Yield a short distance and high resiliency in the connection between the switches and the controller.
- Reduce connectivity loss and enable smart recovery to improve the SDN survivability.
- Improve connectivity by adding path diversity and capacity awareness for controllers.

Which control plane component of the multi-controller must be built to meet the requirements?

- A. control node reliability
- B. controller state consistency
- C. control path reliability
- D. controller clustering

**Answer: B**

#### NEW QUESTION 88

Refer to the exhibit. This network is running OSPF and EIGRP as the routing protocols. Mutual redistribution of the routing protocols has been configured on the appropriate ASBRs. The OSPF network must be designed so that flapping routes in EIGRP domains do not affect the SPF runs within OSPF. The design solution must not affect the way EIGRP routes are propagated into the EIGRP domains.

Which technique accomplishes the requirement?

- A. route summarization on the ASBR interfaces facing the OSPF domain
- B. route summarization on the appropriate ASBRs.
- C. route summarization on the appropriate ASBRs.
- D. route summarization on EIGRP routers connecting toward the ASBR

**Answer: B**

#### NEW QUESTION 93

The network designer needs to use GLOP IP address in order to make them unique within their ASN, which multicast address range will be considered?

- A. 239.0.0.0 to 239.255.255.255
- B. 224.0.0.0 to 224.0.0.255
- C. 233.0.0.0 to 233.255.255.255
- D. 232.0.0.0 to 232.255.255.255

**Answer: C**

#### NEW QUESTION 94

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